WE CLAIM:

1. A method for producing antigen loaded antigen-presenting cells from monocytes ex vivo comprising simultaneously contacting said monocytes with soluble or particulate antigenic material, tumor necrosis factor alpha, and granulocyte-macrophage colony stimulating factor.

2. The method of claim 1, wherein said antigen loaded antigen-presenting cells are produced in less than four days.

3. A method for producing antigen loaded antigen-presenting cells from monocytes ex vivo comprising contacting said monocytes with tumor necrosis factor alpha and granulocyte-macrophage colony stimulating factor at one time point to form antigen-presenting cells and contacting said antigen-presenting cells with soluble or particulate antigenic material at a second time point to form antigen loaded antigen-presenting cells, wherein said antigen loaded antigen-presenting cells are produced in less than four days.

4. The method of claim 1, wherein said antigenic material consists of one or more materials selected from the group consisting of antigenic peptides, peptide mimetics, proteins, polyproteins, immune complexes, whole dying cell bodies, dying cell body fragments, viral vectors and liposomes.

5. The method of claim 2, wherein said antigenic material consists of one or more materials selected from the group consisting of antigenic peptides, peptide mimetics, proteins, polyproteins, immune complexes, whole dying cell bodies, dying cell body fragments, viral vectors and liposomes.

6. The method of claim 3, wherein said antigenic material consists of one or more materials selected from the group consisting of antigenic peptides, peptide mimetics, proteins, polyproteins, immune complexes, whole dying cell bodies, dying cell body fragments, viral vectors and liposomes.

7. The method of claim 1, wherein said antigenic material consists of soluble antigenic material.

8. The method of claim 2, wherein said antigenic material consists of soluble antigenic material.

9. The method of claim 3, wherein said antigenic material consists of soluble antigenic material.

10. The method of claim 1, wherein said antigenic material consists of whole dying cell bodies, dying cell body fragments or both.

11. The method of claim 2, wherein said antigenic material consists of whole dying cell bodies, dying cell body fragments or both.

12. The method of claim 3, wherein said antigenic material consists of whole dying cell bodies, dying cell body fragments or both.

13. The method of claim 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11 or 12, further comprising separating said antigen loaded antigen-presenting cells into fractions containing one or more subsets selected from the group consisting of cells with surface markers (CD1a+ CD207+); cells with surface markers (CD1a+ CD207-); cells with surface markers (CD1a-CD14-); and cells with surface markers (CD14+ CD1a- CD209+).

14. A vaccine comprising antigen loaded antigen-presenting cells made according to the steps of simultaneously contacting monocytes ex vivo with soluble or particulate antigenic material, tumor necrosis factor alpha, and granulocyte-macrophage colony stimulating factor to form antigen loaded antigen-presenting cells.

15. The vaccine of claim 14, wherein said antigen loaded antigen-presenting cells are produced in less than four days.

16. A vaccine comprising antigen loaded antigen-presenting cells made according to the steps of contacting monocytes ex vivo with tumor necrosis factor alpha and granulocyte-macrophage colony stimulating factor at one time point to form antigen-presenting cells and contacting said antigen-presenting cells with soluble or particulate antigenic material at a second time point to form antigen loaded antigen-presenting cells, wherein said antigen loaded antigen-presenting cells are produced in less than four days.

17. The vaccine of claim 14, 15 or 16, wherein said antigenic material consists of one or more materials selected from the group consisting of antigenic peptides, peptide mimetics, proteins, polyproteins, whole dying cell bodies and dying cell body fragments.

18. The vaccine of claim 14, 15 or 16, wherein said antigenic material consists of soluble antigenic material.

19. The vaccine of claim 14, 15 or 16, wherein said antigenic material consists of whole dying cell bodies, dying cell body fragments or both.

20. A vaccine comprising monocyte-derived antigen loaded antigen-presenting cells, wherein said antigen-presenting cells comprise Langerhans cells and interstitial dendritic cells.

21. A vaccine comprising monocyte-derived antigen loaded antigen-presenting cells, wherein said antigen-presenting cells consist of two or more subsets selected from the group consisting of cells with surface markers (CD1a+ CD207+); cells with surface markers (CD1a+ CD207-); cells with surface markers (CD1a-CD14-); and cells with surface markers (CD14+ CD1a- CD209+).

22. A method of inducing tumor specific immune response in a tumor-bearing patient comprising:

producing a vaccine comprising antigen loaded antigen-presenting cells, said antigen loaded antigen-presenting cells made from monocytes ex vivo by simultaneously contacting said monocytes with soluble or particulate antigenic material possessing at least one tumor antigen, tumor necrosis factor alpha, and granulocyte-macrophage colony stimulating factor;

administering said vaccine to said patient,

wherein said patient's cells upon contact with said loaded antigen-presenting cells in said vaccine mature to form cytotoxic cells expressing cytotoxic activity against said tumor cells.

23. The method of claim 22, wherein said antigen loaded antigen-presenting cells are made in less than four days.

24. A method of inducing tumor specific immune response in a tumor-bearing patient comprising:

producing a vaccine comprising antigen loaded antigen-presenting cells, said antigen loaded antigen-presenting cells made by contacting monocytes ex vivo with tumor necrosis factor alpha and granulocyte-macrophage colony stimulating factor at one time point to form antigen-presenting cells and contacting said antigen-presenting cells with soluble or particulate antigenic material possessing at least one tumor antigen at a second time point to form antigen loaded antigen-presenting cells, wherein said antigen loaded antigen-presenting cells are produced in less than four days;

administering said vaccine to said patient,

wherein said patient's cells upon contact with said loaded antigen-presenting cells in said vaccine mature to form cytotoxic cells expressing cytotoxic activity against said tumor cells.

25. A method of inducing tumor specific responses in a tumor-bearing patient comprising:

isolating monocytes and cytotoxic cell precursors from said patient;

producing antigen loaded antigen-presenting cells from said monocytes by simultaneously contacting said monocytes with soluble or particulate antigenic material possessing at least one tumor antigen, tumor necrosis factor alpha, and granulocyte-macrophage colony stimulating factor;

coculturing said loaded antigen-presenting cells with said isolated cytotoxic cell precursors under conditions for their maturation to form cytotoxic cells; and

administering said cytotoxic cells to said patient,

wherein said cytotoxic cells express cytotoxic activity against said tumor cells.

26. The method of claim 25, wherein said antigen loaded antigen-presenting cells are made in less than four days.

27. A method of inducing tumor specific responses in a tumor-bearing patient comprising:

isolating monocytes and cytotoxic cell precursors from said patient;

producing antigen loaded antigen-presenting cells by contacting monocytes ex vivo

with tumor necrosis factor alpha and granulocyte-macrophage colony stimulating factor at one time point to form antigen-presenting cells and contacting said antigen-presenting cells with soluble or particulate antigenic material possessing at least one tumor antigen at a second time point to form antigen loaded antigen-presenting cells, wherein said antigen loaded antigen-presenting cells are produced in less than four days;

coculturing said loaded antigen-presenting cells with said isolated cytotoxic cell precursors under conditions for their maturation to form cytotoxic cells; and

administering said cytotoxic cells to said patient,

wherein said cytotoxic cells express cytotoxic activity against said tumor cells.

28. A method of inducing an immune response in a patient comprising:

producing a vaccine comprising antigen loaded antigen-presenting cells, said antigen loaded antigen-presenting cells made from monocytes ex vivo by simultaneously contacting said monocytes with soluble or particulate antigenic material possessing at least one antigen for which an immune response is desired, tumor necrosis factor alpha, and granulocyte-macrophage colony stimulating factor;

administering said vaccine to said patient,

wherein said patient's cells upon contact with said loaded antigen-presenting cells in said vaccine mature to form cells expressing immunologic activity against said antigen.

29. The method of claim 28, wherein said antigen loaded antigen-presenting cells are made in less than four days.

30. A method of inducing an immune response in a patient comprising:

producing a vaccine comprising antigen loaded antigen-presenting cells, said antigen loaded antigen-presenting cells made by contacting monocytes ex vivo with tumor necrosis factor alpha and granulocyte-macrophage colony stimulating factor at one time point to form antigen-presenting cells and contacting said antigen-presenting cells with soluble or particulate antigenic material possessing at least one antigen for which an immune response is desired at a second time point to form antigen loaded antigen-presenting cells, wherein said antigen loaded antigen-presenting cells are produced in less than four days;

administering said vaccine to said patient,

wherein said patient's cells upon contact with said loaded antigen-presenting cells in said vaccine mature to form cells expressing immunologic activity against said antigen.

31. A method for mounting an immune response mediated by cytotoxic T cells comprising:

producing antigen loaded antigen-presenting cells from monocytes ex vivo by simultaneously contacting said monocytes with soluble or particulate antigenic material possessing at least one antigen for which an immune response is desired, tumor necrosis factor alpha, and granulocyte-macrophage colony stimulating factor;

coculturing said loaded antigen-presenting cells with naïve T cells under conditions for T cell maturation to form cytotoxic T cells; and

contacting said cytotoxic T cells with target cells possessing said antigen,

wherein said cytotoxic T cells express cytotoxic activity against said target cells possessing said antigen.

32. The method of claim 31, wherein said antigen loaded antigen-presenting cells are made in less than four days.

33. A method for mounting an immune response mediated by cytotoxic T cells comprising:

producing antigen loaded antigen-presenting cells by contacting monocytes ex vivo with tumor necrosis factor alpha and granulocyte-macrophage colony stimulating factor at one time point to form antigen-presenting cells and contacting said antigen-presenting cells with soluble or particulate antigenic material possessing at least one antigen for which an immune response is desired at a second time point to form antigen loaded antigen-presenting cells, wherein said antigen loaded antigen-presenting cells are produced in less than four days;

coculturing said loaded antigen-presenting cells with naïve T cells under conditions for T cell maturation to form cytotoxic T cells; and

contacting said cytotoxic T cells with target cells possessing said antigen,

wherein said cytotoxic T cells express cytotoxic activity against said target cells possessing said antigen.

34. The method of claim 22, 23, 24, 25, 26, 27, 28, 29, 30, 31, 32 or 33, wherein said antigenic material consists of soluble antigenic material.

35. The method of claim 22, 23, 24, 25, 26, 27, 28, 29, 30, 31, 32 or 33, wherein said antigenic material consists of whole dying cell bodies, dying cell body fragments or both.

36. The method of claim 22, 23, 24, 25, 26, 27, 28, 29, 30, 31, 32 or 33, wherein cytotoxic cells are CD4 positive.

37. The method of claim 34, wherein cytotoxic cells are CD4 positive.

38. The method of claim 35, wherein cytotoxic cells are CD4 positive.

39. The method of claim 22, 23, 24, 25, 26, 27, 28, 29, 30, 31, 32 or 33, wherein cytotoxic cells are CD8 positive.

40. The method of claim 34, wherein cytotoxic cells are CD8 positive.

41. The method of claim 35, wherein cytotoxic cells are CD8 positive.

42. A method for modifying an immune response in a patient comprising:

producing antigen loaded antigen-presenting cells, said antigen loaded antigen-presenting cells derived from monocytes ex vivo by simultaneously contacting said monocytes with soluble or particulate antigenic material possessing at least one antigen for which an immune response is desired, tumor necrosis factor alpha, and granulocyte-macrophage colony stimulating factor;

administering said antigen-presenting cells to said patient,

wherein said patient's cells upon contact with said loaded antigen-presenting cells are modulated not to express immunologic activity against said antigen.

43. A method for producing an antigen loaded antigen presenting cell fraction composed of two or more subsets comprising

simultaneously contacting monocytes ex vivo with soluble or particulate antigenic material, tumor necrosis factor alpha, and granulocyte-macrophage colony stimulating factor

to form antigen loaded antigen-presenting cells;

isolating from said antigen loaded antigen-presenting cells two or more subsets wherein each subset is capable of eliciting a distinct T cell response and mounting a distinct immune response when administered to a patient;

combining two or more said subsets to form said antigen loaded antigen presenting cell fraction.